PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Impact of Pharmacist-led educational intervention on knowledge of self-management among Asthmatic patients: A prospective cohort study
AUTHORS	Saleem, Shahzadi Sidra; Khan, Amjad; Aman, Rubina; Saleem, Shahzadi Sadia; Bibi, Ayesha; Ahmad, N; Mushtaq, Saima; Mehsud, Saifullah; Green, Ivan; Rashid, Sheikh; Khan, Ahmad; Shah, Kifayat Ullah

VERSION 1 – REVIEW

REVIEWER	Muhammad Sajid Hamid Akash Government College University Faisalabad, Pharmaceutical Chemistry
REVIEW RETURNED	04-Dec-2021

GENERAL COMMENTS	General Comments It is obvious that educating the patients will improve their knowledge, and there have already been several manuscripts lately that have discussed self-management programs. However, referring to the current article, assessment of baseline knowledge deficits of patients and the idea of planning educational programs specifically targeting those knowledge deficits is remarkable in an era of resource and time limitations. Specific Comments Introduction is relevant and concise, emphasizing the need of educational programs for asthmatic patients as asthma can only be controlled but cannot be cured and requires life-long treatment. I think that the data is overall reportable and should be published. However, after addressing the following queries/ comments it will have great potential to get accepted in this journal. There are a few grammatical errors and sentence structure errors- multiple definite or indefinite articles are missing (e.g. ‘a’, ‘an’, ‘the’). A quick revision of the paper is suggested. In methods, address what changes were made based upon removing the two questions from the questionnaire. Also, there is no clear reasoning for calculating a so-called “transformed score”. Clearly specify the educational material used and the role of individuals who did the counseling. Did the same assessor perform counseling of both control and treatment groups?

	In Figure 1, give a relevant explanation of how knowledge is categorized into poor, adequate and good categories. The comparison of your finding (increased self-management knowledge) with the available literature is very well explained in the discussion portion in spite of limited literature available on asthma self-management knowledge. Again - a wonderful job, highlighting an interesting new dimension i-e targeting educational programs specifically to patients' knowledge deficit areas.

REVIEWER	Dermot Ryan University of Edinburgh, Allergy and Respiratory Research Group
REVIEW RETURNED	26-Jan-2022

GENERAL COMMENTS	The authors are to be congratulated for undertaking this work in what have been difficult times. This sort of study is crucial to improving health outcomes in economically disadvantaged nations. The paper might more accurately be described as Assessment of Knowledge on self-management among Asthmatic patients: effects of an educational intervention which is likely to attract greater readership. The English is generally very good but the syntax and some adjectives could do with improvement. In the conclusion the authors should take the opportunity to sek collaboration with primary care physicians in Pakistan: there is a cohort of them out there!! The references are often incomplete making it almost impossible to source them. The comments I make are to assist in putting the work in a greater global context. Page 5, line 3. The strengths and limitations should be listed separately, not as an aggregate statement. Page 8, line 13: Extremely low knowledge of asthma self-management.... By patients, clinicians or both? Page 8 line 22.is this the first study of it's kind in PK? Similar studies have been done in developed countries. Page 8 line 43: which begs the question, how were they allocated? sequentially? Page 8 line 50. what was the approximate time taken for this educational intervention? was it standardised? by whom was it given? Page 8 line 55: by what criteria were they diagnosed? a label of asthma or clinician confirmed asthma does not identify asthma. One would expect that in a tertiary hospital that the diagnosis was confirmed prior to proceeding. Heaney LG, Robinson DS. Severe asthma treatment: need for characterising patients. The Lancet. 2005 Mar 12;365(9463):974-6.: se also Bartlett E, Parr J, Lindeboom W, Khanam MA, Koehlmoos TP. Sources and prevalence of self-reported asthma diagnoses in adults in urban and rural settings of Bangladesh. Global public health. 2013 Jan 1;8(1):79-89. Page 10 line 19: I presume this means not involved in the study design. as a side question, is there a national patient organisation for asthma? Table 1: in what units are the disease duration measured? minutes? months? years? Table 3: I find this difficult to follow. The questionnaire asks these questions and patients are scored for a correct answer. I think that I would prefer to see a table showing the correct answers. It is easy to deduce the numbers giving incorrect answers. Or refer to figure 2 which does a very good job.

	Figure 1: how are good and adequate knowledge defined? Page 14 line 20: perhaps an alternative concept to "incurable disease" might help in patient education e.g. we can do a uige amount to help you get control of this problem but treatment needs to be taken every day? Page 16 line 10: this sentence is incomplete. I cannot understand what is trying to be said. Page 16line 45: Chavennes N not a. also: Habib GM, Rabinovich R, Divgi K, Ahmed S, Saha SK, Singh S, Uddin A, Pinnock H. Systematic review (protocol) of clinical effectiveness and models of care of low-resource pulmonary rehabilitation. NPJ primary care respiratory medicine. 2019 Apr 5;29(1):1-4. This may be helpful and give some direction to the discussion . Page 17 line 5: it should be made clear that this is the pMDI. Are DPIs available in PK? technique is different. Are spacer devices available in PK? page 17 line 31: this depends on how patient use the term cure.For some control will equate to cure. The language is always important when speaking with patients. Page 18 line 29: Many studies in Europe demonstrate the same care deficienies. A recent survey of self percieved educational need by GPs revealed tha approximately 50% of them felt they had a large learning need. Ryan D, Angier E, Gomez M, Church D, Batsiou M, Nekam K, Lomidze N, Gawlik R. Results of an allergy educational needs questionnaire for primary care. Allergy. 2017 Jul;72(7):1123-8.cqqq It has only been sytematically ddressed however in one country. The results are in Haahtela T, Tuomisto LE, Pietinalho A, Klaukka T, Erhola M, Kaila M, Nieminen MM, Kontula E, Laitinen LA. A 10 year asthma program in Finland: major change for the better. Thorax. 2006 Aug 1;61(8):663-70.. it si likely you could draw on this paper to persuade your health authorities of the benefits of an educational program. Franco R, Santos AC, do Nascimento HF, Souza-Machado C, Ponte E, Souza-Machado A, Loureiro S, Barreto ML, Rodrigues LC, Cruz AA. Cost-effectiveness analysis of a state funded programme for control of severe asthma. BMC Public Health. 2007 Dec;7(1):1-8.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1

General Comments: It is obvious that educating the patients will improve their knowledge, and there have already been several manuscripts lately that have discussed self-management programs. However, referring to the current article, assessment of baseline knowledge deficits of patients and the idea of planning educational programs specifically targeting those knowledge deficits is remarkable in an era of resource and time limitations.

Response: We would like to thank the reviewer for recognizing our aim to highlight the dire need for educational programs specifically targeting the knowledge deficit areas of the patients and all the constructive comments are highly appreciated.

Specific Comments: Introduction is relevant and concise, emphasizing the need of educational programs for asthmatic patients as asthma can only be controlled but cannot be cured and requires life-long treatment. I think that the data is overall reportable and should be published. However, after addressing the following queries/ comments it will have great potential to get accepted in this journal.

Response: We are thankful to the reviewer for the positive comments. We truly appreciate all the comments and suggestions mentioned below which have improved our overall manuscript. All the comments have been addressed and changes are highlighted in green color in revised manuscript.

1. There are a few grammatical errors and sentence structure errors- multiple definite or indefinite articles are missing (e.g. ‘a’, ‘an’, ‘the’). A quick revision of the paper is suggested.

Response: Thank you for pointing this out. The manuscript has been thoroughly revised and necessary changes have been incorporated and highlighted in green color.

2. In methods, address what changes were made based upon removing the two questions from the questionnaire. Also, there is no clear reasoning for calculating a so-called “transformed score”.

Response: Thank you for highlighting this point, required changes have been incorporated on page 8 line # 20-21 and highlighted in green color.

3. Clearly specify the educational material used and the role of individuals who did the counseling. Did the same assessor perform counseling of both control and treatment groups?

Response: Thank you for pointing this out. Necessary changes have been incorporated on page 7 line # 17-22. Yes, the same assessor performed counselling of both control and treatment groups.

4. In Figure 1, give a relevant explanation of how knowledge is categorized into poor, adequate and good categories.

Response: Thank you for highlighting this point. Necessary explanation has been added on page 12 line 3-4 and highlighted in green color.

5. The comparison of your finding (increased self-management knowledge) with the available literature is very well explained in the discussion portion in spite of limited literature available on asthma self-management knowledge.
   Again - a wonderful job, highlighting an interesting new dimension i-e targeting educational programs specifically to patients’ knowledge deficit areas.

Response: We are highly thankful to the reviewer for recognizing our aim and for positive comments. We truly appreciate all the constructive comments and suggestions.

Reviewer 2

The authors are to be congratulated for undertaking this work in what have been difficult times. This sort of study is crucial to improving health outcomes in economically disadvantaged nations. The paper might more accurately be described as Assessment of Knowledge on self-management among Asthmatic patients: effects of an educational intervention which is likely to attract greater readership.

The English is generally very good but the syntax and some adjectives could do with improvement. In the conclusion the authors should take the opportunity to seek collaboration with primary care physicians in Pakistan: there is a cohort of them out there!! The references are often incomplete making it almost impossible to source them.

Response: We are thankful to the reviewer for the positive and valuable comments. We truly appreciate all the comments and suggestions mentioned below which have improved the overall manuscript. The title has been edited as “Assessment of Knowledge on self-management among Asthmatic patients: The effects of an educational intervention”. All the references including webpages have been re-accessed for any shortcomings thus making it possible to source them. All the comments have been addressed and changes are highlighted in green color in revised manuscript.

1. Page 5, line 3. The strengths and limitations should be listed separately, not as an aggregate statement.

Response: Thank you for highlighting this point. Necessary changes have been made on page 4 and highlighted in green color.

2. Page 8 line 13: Extremely low knowledge of asthma self-management……By patients, clinicians or both?

Response: Thank you for pointing this out, required changes have been incorporated on page 7 line 1 and highlighted in the revised manuscript.

3. Page 8 line 22.is this the first study of it's kind in PK? Similar studies have been done in developed countries.

Response: Thank you for highlighting this point. Yes, as per our knowledge this is perhaps the first study of its kind from Pakistan assessing specifically the improvement in asthma self-management knowledge through an educational intervention while such studies have already been carried out in developed countries. Necessary changes have been made on page 7 line 4 and highlighted in green color.

4. Page 8 line 43: which begs the question, how were they allocated? Sequentially?

Response: Thank you for pointing this out. As quasi experimental design was used, patients from the physicians who agreed to employ the educational intervention were categorized as treatment groups while patients from other physicians who did not agree were categorized as control group. Necessary changes have been made in the manuscript on page 7 line 12-14 to make it more comprehensive.

5. Page 8 line 50. what was the approximate time taken for this educational intervention? was it standardised? by whom was it given?

Response: Thank you for highlighting this point. Time varied according to each patients’ apprehension and previous knowledge and wasn’t standardized. Educational intervention was

specifically given by the Pharmacist (research scholar). Necessary changes have been made on page 7 line 16-21.

6. Page 8 line 55: by what criteria were they diagnosed? a label of asthma or clinician confirmed asthma does not identify asthma. One would expect that in a tertiary hospital that the diagnosis was confirmed prior to proceeding. Heaney LG, Robinson DS. Severe asthma treatment: need for characterising patients. The Lancet. 2005 Mar 12;365(9463):974-6.: se also Bartlett E, Parr J, Lindeboom W, Khanam MA, Koehlmoos TP. Sources and prevalence of self-reported asthma diagnoses in adults in urban and rural settings of Bangladesh. Global public health. 2013 Jan 1;8(1):79-89.

Response: We are agreed with this suggestion. Necessary changes have been incorporated on page 7 line 23.

7. Page 10 line 19: I presume this means not involved in the study design. as a side question, is there a national patient organisation for asthma?

Response: Thank you for pointing this out. The sentence “Patients were not involved in the design and conduct of this study” has been added on page 9 line 10. For the other part of the query, unfortunately, as per our knowledge there exists no such national patient organization for asthma in Pakistan.

8. Table 1: in what units are the disease duration measured? minutes? months? years?

Response: Thank you for highlighting this point. Disease duration is measured in years. Necessary changes have been made in Table 1 and highlighted with green color.

9. Table 3: I find this difficult to follow. The questionnaire asks these questions and patients are scored for a correct answer. I think that I would prefer to see a table showing the correct answers. It is easy to deduce the numbers giving incorrect answers. Or refer to figure 2 which does a very good job.

Response: Thank you for the valuable comment. As per suggestion, data for correct responses to all 14 questions have already been incorporated in Figure 2 as percentages along with data for incorrect and unknown responses also. Therefore, we have omitted Table 3 from the manuscript to avoid repetition.

10. Figure 1: how are good and adequate knowledge defined?

Response: Thank you for pointing this out. Necessary changes have been incorporated on page 12 line 3-4 and highlighted in green color.

11. Page 14 line 20: perhaps an alternative concept to "incurable disease" might help in patient education e.g. we can do a uige amount to help you get control of this problem but treatment needs to be taken every day?

Response: Thank you for the valuable suggestion, required changes have been incorporated on page 12 line 10-11 and highlighted in manuscript.

12. Page 16 line 10: this sentence is incomplete. I cannot understand what is trying to be said.

Response: Thank you for pointing this out. Necessary changes have been made on page 14 line 4-5 and highlighted with green in the manuscript.

13. Page 16 line 45: Chavennes N not a. also: Habib GM, Rabinovich R, Divgi K, Ahmed S, Saha SK, Singh S, Uddin A, Pinnock H. Systematic review (protocol) of clinical effectiveness and models of care of low-resource pulmonary rehabilitation. NPJ primary care respiratory medicine. 2019 Apr 5;29(1):1-4. This may be helpful and give some direction to the discussion.

Response: Thank you for the valuable suggestion. Data has been added on page 14 line 18-21 in the manuscript and this article has been cited.

14. Page 17 line 5: it should be made clear that this is the pMDI. Are DPIs available in PK? technique is different. Are spacer devices available in PK?

Response: Thank you for pointing this out. Necessary change has been made in the manuscript on page 15 line 3-4. Yes, DPIs are also available in Pakistan but our study participants were prescribed pMDIs and spacer devices are also available but requires proper counselling of patients by a professional to ensure their correct use.

15. page 17 line 31: this depends on how patient use the term cure. For some control will equate to cure. The language is always important when speaking with patients.

Response: Thank you for highlighting this point. This is actually where the researcher intervened and educated the patients about the incurable nature of asthma and also clarified their misbelief that control of asthma cannot be equated with cure. Necessary changes have been made on page 15 line 22-23 and page 16 line 1 in the manuscript and highlighted in green color.

16. Page 18 line 29: Many studies in Europe demonstrate the same care deficienies. A recent survey of self percieved educational need by GPs revealed tha approximately 50% of them felt they had a large learning need. Ryan D, Angier E, Gomez M, Church D, Batsiou M, Nekam K, Lomidze N, Gawlik R. Results of an allergy educational needs questionnaire for primary care. Allergy. 2017 Jul;72(7):1123-8.cqqq It has only been sytematically ddressed however in one country. The results are in Haahtela T, Tuomisto LE, Pietinalho A, Klaukka T, Erhola M, Kaila M, Nieminen MM, Kontula E, Laitinen LA. A 10 year asthma program in Finland: major change for the better. Thorax. 2006 Aug 1;61(8):663-70.. it si likely you could draw on this paper to persuade your health authorities of the benefits of an educational program. Franco R, Santos AC, do Nascimento HF, Souza-Machado C, Ponte E, Souza-Machado A, Loureiro S, Barreto ML, Rodrigues LC, Cruz AA. Cost-effectiveness analysis of a state funded programme for control of severe asthma. BMC Public Health. 2007 Dec;7(1):1-8.

Response: Thank you for the valuable suggestion. Necessary changes have been incorporated on page 16 line 13-23 and page 17 line 1-8 in the manuscript (highlighted in green) and all of the suggested articles have been cited.

VERSION 2 – REVIEW

REVIEWER	Muhammad Sajid Hamid Akash Government College University Faisalabad, Pharmaceutical Chemistry
REVIEW RETURNED	24-Feb-2022

GENERAL COMMENTS	Authors have revised their manuscript with significant improvements. No further comments from my side.

REVIEWER	Dermot Ryan University of Edinburgh, Allergy and Respiratory Research Group
REVIEW RETURNED	03-Mar-2022

GENERAL COMMENTS	This is a very much improved manuscript but still has some way to go. In particular the manuscript needs to have grammar and vocabulary reviewed by a native English speaker to ensure readability. For example many tenses are inconsistent and thus confusing. These comments are designed to be of further assistance. Page 5. Line 4: This is the priority: asthma control and improved quality of life. As Control increases, costs decrease significantly (Haatela, 10 year asthma study, already referencced) Page 5. Line 8 : in essence the Haatela study already quoted already demonstrates that this approach can be replicated across a health care system Page 6 line 25:: This statement is not quite accurate although it might be if it referred to an increased or higher prevalence of poorly controlled asthma. Page 7 line 4: adherence is probably a better word and concept than compiance Page 7 lline 5."Patients' general knowledge about asthma includes pathophysiology of disease...."do the authors mean should include? Page 7 line 12: I think it would be reasonable to say that self management is conditional on education: patients are much less adherent if they do not understand the rationale for treatment and monitoring, but of course the edication needs to be accompanied by understanding. Page 8 line 10:I do not understand what the authors are trying to say.. Page 8 line 19.I think the authers mean comprehension (understanding) not apprehension (fear). Page 8 line 21: I think the authors mean confirmed by spirometry. Tabl1 i: family history:disease. This is somewhat unclear Page 13 line 8 Breath, not breadth Discussions: the short conclusions should be given at the beginning with the discussion centred around this Thus the conclusions were that you found a very low level of knowledge and that 2) this was significantly improved by an educational intervention.

VERSION 2 – AUTHOR RESPONSE

Reviewer 1

Authors have revised their manuscript with significant improvements. No further comments from my side.

Response: We are thankful to the reviewer for such a positive comment. We truly appreciate all the comments and suggestions suggested by the reviewer that have helped us to improve the overall manuscript.

Reviewer 2

This is a very much improved manuscript but still has some way to go. In particular the manuscript needs to have grammar and vocabulary reviewed by a native English speaker to ensure readability. For example, many tenses are inconsistent and thus confusing. These comments are designed to be of further assistance.

Response: We are thankful to the reviewer for the positive and valuable comments. Manuscript has now been reviewed by three experts and edited accordingly to ensure good readability of the manuscript. The edited copy of the manuscript with track changes is also attached. All the remaining comments have been addressed and changes are highlighted in green color in revised manuscript.

1. Page 5, Line 4: This is the priority: asthma control and improved quality of life. As Control increases, costs decrease significantly (Haatela, 10 year asthma study, already referencced).

Response: Thank you for the valuable comment. Necessary changes have been made in the strengths and limitation section on page 4 as per suggestion of the editor and highlighted in green color.

2. Page 5. Line 8: in essence the Haatela study already quoted already demonstrates that this approach can be replicated across a health care system.

Response: Thank you for pointing this out, required changes have already been incorporated in the strengths and limitation section on page 4 as per suggestion of the editor and highlighted in green color.

3. Page 6 line 25: This statement is not quite accurate although it might be if it referred to an increased or higher prevalence of poorly controlled asthma.

Response: Thank you for highlighting this point. Necessary changes have been made on page 5 line # 12-15 in the manuscript and highlighted in green color.

4. Page 7 line 4: adherence is probably a better word and concept than compliance?

Response: Thank you for pointing this out. Necessary changes have been made in the manuscript during revision and highlighted with green on page 6 line # 1-3.

5. Page 7 line 5: "Patients' general knowledge about asthma includes pathophysiology of disease...."do the authors mean should include?

Response: Thank you for highlighting this point. Here the author 'Nguyen et al, 2018' already referenced summarizes that the patients' general knowledge about asthma already covers disease pathophysiology, purpose of treatment regimen, recognition of disease triggers etc.

6. Page 7 line 12: I think it would be reasonable to say that self-management is conditional on education: patients are much less adherent if they do not understand the rationale for treatment and monitoring, but of course the education needs to be accompanied by understanding.

Response: We agreed with this suggestion. Necessary changes have been incorporated on page 6 line # 10-15 and highlighted with green in the manuscript.

17. Page 8 line 10: I do not understand what the authors are trying to say.

Response: Thank you for pointing this out. Necessary changes have been made on page 7 line 15-17 in methodology section in the manuscript and highlighted with green.

18. Page 8 line 19. I think the authors mean comprehension (understanding) not apprehension (fear).

Response: Thank you for pointing this out. Yes, its comprehension so apprehension has been replaced by comprehension on page 8 line # 2 and highlighted with green color.

19. Page 8 line 21: I think the authors mean confirmed by spirometry.

Response: Thank you for the valuable comment. Yes, we mean patients asthma diagnosis was confirmed through spirometry.

20. Tabl1 i: family history: disease. This is somewhat unclear?

Response: Thank you for pointing this out. Here disease means asthma, necessary changes have been incorporated in Table 1 and highlighted with green color.

21. Page 13 line 8 Breath, not breadth?

Response: Thank you for pointing this out, its breath, necessary changes have been made on page 11 line # 8 and highlighted with green in manuscript.

22. Discussions: the short conclusions should be given at the beginning with the discussion centred around this. Thus the conclusions were that you found a very low level of knowledge and that 2) this was significantly improved by an educational intervention.

Response: Thank you for the valuable suggestion. Necessary changes have been made in the discussion on page 12 line # 1-3 and highlighted with green in the manuscript.

VERSION 3 – REVIEW

REVIEWER	Dermot Ryan University of Edinburgh, Allergy and Respiratory Research Group
REVIEW RETURNED	25-Apr-2022

GENERAL COMMENTS	I thank the authors for their perseverance. The manuscript has clearly not been reviewed and edited by a native speaker of English rendering the paper difficult to understand. Using the example of the abstract Line 3: poorly controlled in majority of patients. this in the majority of patients.: Line 4-5: lack of knowledge about the disease management, should be lack of knowledge of or concerning disease managment. Line 6: management among the established asthma patients.There is no need for THE . Page 4 line 2: This advocates that imparting self-management education in structured patient care could result in achieving optimal asthma control and improve patients health related quality of life.should really read: imparting education and slef management skills should be seen as part of or as an integral component of asthma management . Other comments: Page 3 line 17: are DPIs available in Pakistan? this needs to be clarified as they employ a different inhaler tachnique. Page 3 line 18: although flu jab is important while it is a measure of some importance , the most important thing is the adherence to regular use of ICS. ßtrengths and limitations need to be more structured explaining which is which and why it is mentioned. Page 7 line 2: many clinicians in many health care settings are not compliant with guidelines thus much of the problem with poor asthma control is poor physician assessment and advice (management). Patient knowledge is contingent on this knowledge transfer by the clinician accompanied by patient engagement. There is also the issue that slavish compliance to guidelines does not optimise individual patient care. Page 14 line 10: the re evaluation is the important thing here. further demonstration or instruction on technique is needed if faults are found.

VERSION 3 – AUTHOR RESPONSE

Reviewer 2

I thank the authors for their perseverance. The manuscript has clearly not been reviewed and edited by a native speaker of English rendering the paper difficult to understand. Using the example of the abstract

Line 3: poorly controlled I majority of patients. This is the majority of patients.:

Line 4-5: lack of knowledge about disease management, should be a lack of knowledge of or concerning disease management.

Line 6: management among the established asthma patients. There is no need for THE.

Page 4 line 2: This advocates that imparting self-management education in structured patient care could result in achieving optimal asthma control and improve patients health related quality of life should really read: imparting education and self-management skills should be seen as part of or as an integral component of asthma management.

Response: We are thankful to the reviewer for the valuable comments. The manuscript has been reviewed and edited by a native English speaker and expert Prof. Ivan R. Green (Emeritus Professor

at University of Stellenbosch, South Africa). Please check the tracked changes version of manuscript for verification. We do hope that now the learned reviewer will be satisfied with quality of the English of the manuscript. Necessary changes have been made as per the reviewer's suggestion while the abstract was reformatted according to the structured abstract recommended in the journal's instructions for authors for research articles as suggested by the editor and highlighted in green color. All the remaining comments have also been addressed and changes are highlighted in green color in the revised manuscript.

1. Page 3 line 17: are DPIs available in Pakistan? this needs to be clarified as they employ a different inhaler technique.

Response: We are thankful to the reviewer for highlighting this point. Yes, though DPIs are available in Pakistan but they are not frequently prescribed nor preferred by patients because of their using issues.

2. Page 3 line 18: although flu jab is important while it is a measure of some importance, the most important thing is the adherence to regular use of ICS.

Response: We are thankful to the reviewer for pointing this out. Yes, though a flu jab is a measure of some importance, the most important thing is the adherence to regular use of ICS.

3. Strengths and limitations need to be more structured explaining which is which and why it is mentioned.

Response: Thank you for the valuable suggestion. "Strengths and limitations of this study" has been reformatted as per the editor's suggestion to contain up to five short bullet points, no longer than one sentence each, that relate specifically to the methods and are highlighted in green color.

4. Page 7 line 2: many clinicians in many health care settings are not compliant with guidelines thus much of the problem with poor asthma control is poor physician assessment and advice (management). Patient knowledge is contingent on this knowledge transfer by the clinician accompanied by patient engagement. There is also the issue that slavish compliance to guidelines does not optimize individual patient care.

Response: We are thankful to the reviewer for such a valuable comment. We agree with the reviewer that non-compliance of physician/healthcare provider with guidelines and poor physician assessment and advice to the patient contributes significantly towards poor asthma control and patient knowledge is contingent on this knowledge transfer by the clinician accompanied by patient engagement. However, in our study, we strived to conclude whether a positive role can be played by pharmacists being a member of the healthcare team in improving patients' knowledge.

5. Page 14 line 10: the re-evaluation is the important thing here. further demonstration or instruction on technique is needed if faults are found.

Response: We are thankful to the reviewer for such a positive comment. Yes, re-evaluation and reassessment of inhaler technique are of prime importance at each patient visit accompanied by demonstration and instruction on technique if faults are found.